

REMARKS

Applicants have amended claims 1, 6-8, 13, 15, 20-25, 28, 30, 51, 54, 55, 57, 66, 67, 69, 71, 78, 79, 81, and 83; and have canceled claims 12, 26, 27, 29, 32-44, 80 and 84. The pending independent claims are 1, 15, 51, and 69.

Information Disclosure Statement

Applicants are submitting an Information Disclosure Statement with the requested (previously cited) references and request that the Examiner consider these cited references.

Specification

Applicants have amended the specification to update the status of parent applications from which the present application claims priority.

Claim Rejections – 35 U.S.C. § 112

Claims 6-8, 20-25, 35-37, 54, 55, 57, 66-68, 78-81, and 83 are rejected under 35 U.S.C. § 112, second paragraph. The claims have been amended to provide antecedent bases.

Claim Rejections – 35 U.S.C. § 102

Claims 1-6, 9, 12, 15-23, 26, 29, 32-36, 38, 39, 42, 51-54, 56, 58, 82-84, and 86 are rejected under 35 U.S.C. § 102(b) as anticipated by EP 0 277 020 (Mizuta). As amended, the claims recite a method comprising disposing a precursor solution onto a surface of a layer to form a precursor film. The precursor film includes, among other things, a fluorinated carboxylate salt of an alkaline earth metal. Mizuta does not disclose or suggest the claimed method comprising disposing a precursor solution onto a surface of a layer to form a precursor film comprising a fluorinated carboxylate salt of an alkaline earth metal. For at least this reason, Mizuta does not anticipate claims 1, 15, 51, and their dependent claims, and the rejection should be withdrawn.

Claims 15, 17, 24, 32, 34, 37, 51, 58, and 86 are rejected under 35 U.S.C. § 102(e) as anticipated by U.S. Patent No. 6,172,009 (Smith). As amended, the claims recite a method comprising disposing a precursor solution onto a surface of a layer to form a precursor film. The precursor film includes, among other things, a non-halogenated carboxylate salt of copper. The office action appears to have acknowledged that Smith does not disclose or suggest the claimed method comprising disposing a precursor solution onto a surface of a layer to form a precursor film comprising a non-halogenated carboxylate salt of copper because previously-pending claim 29 (which recited that the carboxylate salt of copper comprises a nonhalogenated carboxylate salt of copper) was not rejected as anticipated by Smith. For at least this reason, Smith does not anticipate claims 15, 51, and their dependent claims, and the rejection should be withdrawn.

Claims 15-17, 20-24, 32-34, 37, 38, 51, 58, and 86 are rejected under 35 U.S.C. § 102(e) as anticipated by U.S. Patent No. 6,022,832 (Fritzemeier). As amended, the claims recite a method comprising disposing a precursor solution onto a surface of a layer to form a precursor film. The precursor film includes, among other things, a non-halogenated carboxylate salt of copper. The office action appears to have acknowledged that Fritzemeier does not disclose or suggest the claimed method comprising disposing a precursor solution onto a surface of a layer to form a precursor film comprising a non-halogenated carboxylate salt of copper because previously-pending claim 29 (see above) was not rejected as anticipated by Fritzemeier. For at least this reason, Fritzemeier does not anticipate claims 15, 51, and their dependent claims, and the rejection should be withdrawn.

Claim Rejections – 35 U.S.C. § 103

Claims 10, 11, 13, 14, 27, 28, 30, 31, 40, 41, 43, and 44 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Mizuta in view of Smith. As amended, these rejected claims include a feature of (now-canceled) claim 12, which was not rejected as being unpatentable over Mizuta in view of Smith. Accordingly, Applicants request that the rejection be withdrawn.

Claims 16, 20-23, 33, and 56 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Smith. As discussed above, the office action appears to have acknowledged that Smith does

not disclose or suggest the claimed method comprising disposing a precursor solution onto a surface of a layer to form a precursor film comprising a non-halogenated carboxylate salt of copper. There is also no suggestion to modify the method of Smith to arrive at the claimed methods. Accordingly, Applicants request that the rejection be withdrawn.

Claims 1-3, 6, 7, 12, 13, 29, 30, 42 and 43 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Smith in view of EP 0 431 813 (Chen); and claims 1-3, 6-8, 12, 13, 29, 30, 42, 43, 66, and 78 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Fritzemeier in view of Chen. The office action has acknowledged that Smith and Fritzemeier do not teach the use of a copper salt other than a trifluoroacetate. But according to the office action, it would have been obvious to use copper ethylhexanoate in addition to the copper trifluoroacetate with the expectation of similar results because Chen discloses that such copper materials may be used to form YBCO superconductors.

However, there is no support for the proposition that using copper ethylhexanoate in addition to the copper trifluoroacetate would provide similar results. Note, for example, that in using copper ethylhexanoate in addition to the copper trifluoroacetate, Chen discloses using the alkoxides of the rare earth metal and alkaline earth metal, even though it is clear that carboxylate salts and fluorinated carboxylate salts of metals (namely, copper trifluoroacetate) were known to Chen. Instead of indicating that the combination of copper ethylhexanoate and copper trifluoroacetate can be used with other salts of the rare earth metal and alkaline earth metal, Chen limits his method to alkoxides of the rare earth metal and alkaline earth metal. There is no support in Chen that using the combination of copper ethylhexanoate and copper trifluoroacetate with a carboxylate salt of a rare earth metal and a fluorinated carboxylate salt of an alkaline earth metal would provide similar results as the methods disclosed in Smith and Fritzemeier.

Moreover, there is no suggestion in Smith or Fritzemeier to make the proposed addition of copper ethylhexanoate. Both Smith and Fritzemeier used a trifluoroacetate precursor method, in which all three metals (Y, Ba, and Cu) are introduced in the form of their trifluoroacetate salts. Neither Smith nor Fritzemeier indicates any deficiencies with the trifluoroacetate precursor method; instead, both references tout the performance of the resulting superconductor achievable

by their methods. As a result, one skilled in the art reading Smith or Fritzemeier would not have been motivated to add copper ethylhexanoate, which would further complicate the methods disclosed by Smith and Fritzemeier without any expectation that the addition would give better results or even give similar results. Thus, because none of the references provides the requisite motivation for the proposed combination, Applicants request that the rejection be withdrawn.

Claims 25, 55, 57, 67-77, and 79-81 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Fritzemeier. As discussed above, the office action appears to have acknowledged that Fritzemeier does not disclose or suggest the claimed method comprising disposing a precursor solution onto a surface of a layer to form a precursor film comprising a non-halogenated carboxylate salt of copper. There is also no suggestion to modify the method of Fritzemeier to arrive at the claimed methods. Accordingly, Applicants request that the rejection be withdrawn.

Double Patenting

Certain claims were objected to as being substantial duplicates of the other claims. Applicants have canceled certain claims to address these rejections.

For at least the reasons discussed above, Applicants believe the claims are in condition for allowance, which action is requested.

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Enclosed is a Petition for Extension of Time with the fee. Please apply any other charges or credits to deposit account 06-1050.

Respectfully submitted,

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